



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2017-0389; FRL-9974-45-Region 4]

Air Plan Approval; KY: Removal of Reliance on Reformulated Gasoline in the Kentucky Portion of the Cincinnati-Hamilton Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a State Implementation Plan (SIP) revision submitted on September 13, 2017, by the Commonwealth of Kentucky, through the Kentucky Division for Air Quality (KDAQ) in support of the Commonwealth's separate petition requesting that EPA remove the federal reformulated gasoline (RFG) requirements for Boone, Campbell, and Kenton counties in the Kentucky portion of the Cincinnati-Hamilton, Ohio-Kentucky-Indiana 2008 8-hr ozone maintenance area (hereinafter referred to as the "Northern Kentucky Area" or "Area"). The SIP revision revises the Commonwealth's maintenance plan emissions inventory and associated motor vehicle emissions budgets (MVEBs) to remove reliance on emissions reductions from the federal RFG program requirements; a program that the Commonwealth voluntarily opted into in 1995. The SIP revision also includes a non-interference demonstration evaluating whether removing reliance on the RFG requirements in the Northern Kentucky Area would interfere with the requirements of the Clean Air Act (CAA or Act). EPA is proposing to approve this SIP revision and the corresponding non-interference demonstration because EPA has preliminarily determined that

the revision is consistent with the applicable provisions of the CAA.

DATES: Comments must be received on or before **[INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R04-OAR-2017-0389 at <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Dianna Myers, Air Regulatory Management Section, Air Planning and Implementation Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Ms. Myers can be reached via telephone at (404) 562-9207 or via electronic mail at Myers.Dianna@epa.gov.

SUPPLEMENTARY INFORMATION:

I. What Action is Being Proposed?

This rulemaking proposes to approve Kentucky's September 13, 2017, SIP revision in support of Kentucky's petition to opt-out of the federal RFG requirements in Boone, Campbell, and Kenton Counties.¹ Specifically, EPA is proposing to approve Kentucky's changes to the maintenance plan mobile emissions inventory and the associated MVEBs related to its redesignation request for the Cincinnati-Hamilton 2008 8-hour ozone maintenance area to reflect removal of reliance on federal RFG requirements. As part of this proposed approval, EPA is also proposing to find that the Commonwealth has demonstrated that removing the federal RFG requirements in Boone, Campbell, and Kenton Counties will not interfere with attainment or maintenance of any national ambient air quality standards (NAAQS or standard) or with any other applicable requirement of the CAA.

On August 26, 2016, Kentucky submitted a 2008 8-hour ozone redesignation request and maintenance plan for the Cincinnati-Hamilton Area, which EPA approved on July 5, 2017 (82 FR 30976).² With its redesignation request, Kentucky included a maintenance demonstration plan that estimates emissions through 2030 that modeled RFG because Kentucky previously opted into the RFG program. However, through this SIP revision, KDAQ is updating the mobile (on-road and non-road) emissions inventory for that maintenance plan (including the MVEBs) to

¹ Pursuant to 40 CFR 80.72(b), the Governor must submit a petition to the EPA Administrator requesting removal of any opt-in areas from the federal RFG program. The petition must include certain specified information and any additional information requested by the Administrator. As fully described in section III below, if RFG is relied upon as a control measure in any approved SIP or plan revision, the federal RFG program opt-out regulations require that a SIP revision must be submitted. Kentucky's maintenance plan relied upon RFG; as a result, Kentucky submitted this SIP revision. The decision on whether to grant the opt-out petition pursuant to 40 CFR 80.72(b) is at the discretion of the Administrator and will be made through a separate action.

² The Cincinnati-Hamilton, OH-KY-IN Area is composed of portions of Boone, Campbell, and Kenton Counties in Kentucky; Butler, Clermont, Clinton, Hamilton and Warren Counties in Ohio; and a portion of Dearborn County in Indiana. This action only pertains to the Kentucky portion of the maintenance area.

reflect Kentucky's petition to opt-out of the RFG requirements for Boone, Campbell, and Kenton counties in the Northern Kentucky Area. The updates are summarized in Kentucky's submittal.

In support of the September 13, 2017, SIP revision, Kentucky has evaluated whether removing reliance on the federal RFG requirements would interfere with air quality in the Area. To make this demonstration of noninterference, Kentucky completed a technical analysis, including modeling, to estimate the change in emissions that would result from removing RFG from Boone, Campbell, and Kenton Counties in the Northern Kentucky Area.

In the noninterference demonstration, Kentucky used EPA's Motor Vehicle Emissions Simulator (MOVES) to develop its projected emissions inventory according to EPA's guidance for on-road mobile sources using MOVES version 2014a.³ Future-year on-road mobile source emissions estimates for volatile organic compounds (VOC) and nitrogen oxides (NOx) for years 2020 and 2030 were generated with MOVES2014a without RFG. Emissions estimates were interpolated for the year 2025. The noninterference demonstration showed compliance with and maintenance of the 2008 8-hour ozone NAAQS by showing that current and future emissions of NOx and VOC remain at or below the 2014 base year emissions inventory without the use of RFG. For more detailed information on the current approved maintenance plan, see EPA's May 1, 2017 (82 FR 20297), proposed approval of Kentucky's maintenance plan for the 2008 8-hour ozone NAAQS.

In this action, EPA is proposing to approve the revision to the Commonwealth's maintenance plan emissions inventory and associated MVEBs to remove reliance on emissions

³ Kentucky used the NONROAD 2008 model within MOVES2014a to develop the non-road emissions inventory to reflect the emissions changes from removing RFG from the Northern Kentucky Area. Table 1 reflects the emissions changes.

reductions from the federal RFG program requirements, and to find that Kentucky's noninterference demonstration supports the conclusion that removal of reliance on federal RFG requirements in Boone, Campbell, and Kenton Counties in the Northern Kentucky Area will not interfere with attainment or maintenance of any NAAQS or with any other applicable requirement of the CAA.

II. What is the Background for the Northern Kentucky Area?

Northern Kentucky was included in the Cincinnati-Hamilton Area which was originally designated as a moderate nonattainment area for the 1-hour ozone standard on November 6, 1991 (56 FR 56694). In 1995, Kentucky voluntarily opted into the RFG program under Phase I of a two-phase nationwide program to reduce the volatility of commercial gasoline during the summer ozone season. Kentucky elected to stay in the program under Phase II which was more stringent than Phase I.

On July 18, 1997, EPA promulgated a revised 8-hr ozone standard of 0.08 parts per million (ppm). This standard was more stringent than the 1-hour ozone standard. On June 19, 2000 (65 FR 37879), the Cincinnati-Hamilton 1-hour nonattainment Area was redesignated as attainment for the 1-hour ozone NAAQS, and was considered to be a maintenance area subject to a CAA section 175A maintenance plan for the 1-hour ozone NAAQS. On April 30, 2004, EPA designated the Cincinnati-Hamilton OH-KY-IN Area under subpart 1 as a "basic" 1997 8-hour ozone NAAQS nonattainment area (69 FR 23857).⁴ On August 5, 2010 (75 FR 47218), the Kentucky portion of the Cincinnati-Hamilton 1997 8-hour ozone area was redesignated to

⁴ The 1997 8-hour ozone area included in its entirety Boone, Campbell, and Kenton Counties in Kentucky and Butler, Clermont, Clinton, Hamilton and Warren Counties in Ohio; and a portion of Dearborn County in Indiana.

attainment. On March 12, 2008, EPA revised both the primary and secondary NAAQS for ozone to a level of 0.075 ppm to provide increased protection of public health and the environment. *See* 73 FR 16436 (March 27, 2008). The 2008 ozone NAAQS retains the same general form and averaging time as the 0.08 ppm NAAQS set in 1997, but is set at a more protective level. Under EPA's regulations at 40 CFR part 50, the 2008 8-hour ozone NAAQS is attained when the 3-year average of the annual fourth highest daily maximum 8-hour average ambient air quality ozone concentrations is less than or equal to 0.075 ppm. *See* 40 CFR 50.15.

Effective July 20, 2012, EPA designated any area that was violating the 2008 8-hour ozone NAAQS based on the three most recent years (2008-2010) of air monitoring data as a nonattainment area. *See* 77 FR 30088 (May 21, 2012). The Cincinnati-Hamilton, OH-KY-IN Area was designated as a marginal ozone nonattainment area.⁵ *See* 40 CFR 81.318. Areas that were designated as marginal nonattainment areas were required to attain the 2008 8-hour ozone NAAQS as expeditiously as possible but no later than July 20, 2015, based on 2012-2014 monitoring data. On May 4, 2016 (81 FR 26697), EPA published its determination that the Cincinnati-Hamilton, OH-KY-IN Area had attained the 2008 8-hour ozone NAAQS by the attainment deadline.

III. What is the History of the Reformulated Gasoline Requirement?

The 1990 amendments to the CAA designed the RFG program to reduce ozone levels in the largest metropolitan areas in the country with the worst ground-level ozone or smog problems by reducing vehicle emissions of compounds that form ozone, specifically VOC. The 1990 CAA amendments, specifically section 211(k)(5), directed EPA to issue regulations that

⁵ The 2008 8-hr ozone area included portions of Boone, Campbell, and Kenton Counties; Butler, Clermont, Clinton, Hamilton and Warren Counties in its entirety in Ohio; and a portion of Dearborn County in Indiana.

specify how gasoline can be “reformulated” so as to result in significant reductions in vehicle emissions of ozone-forming and toxic air pollutants relative to the 1990 baseline fuel, and to require the use of such reformulated gasoline in certain “covered areas.” The Act defined certain nonattainment areas as “covered areas” which are required to use RFG and provided other areas with an ability to “opt-in” to the federal RFG program.⁶ Of relevance here is CAA section 211(k)(6), which provides that upon application of the Governor of a State, the Administrator shall apply the prohibition contained in section 211(k)(5) for areas to “opt-in” to the federal RFG program. In 1993,⁷ the Governor of the Commonwealth of Kentucky petitioned the Administrator to “opt-in” to the RFG program for the Northern Kentucky Area which consisted of Boone, Campbell, and Kenton Counties.

EPA first published regulations for the federal RFG program on February 16, 1994 (59 FR 7716). These regulations constituted Phase I of a two-phase nationwide program. A current listing of the RFG requirements for states can be found on EPA’s website at:

<https://www.epa.gov/gasoline-standards>. The federal RFG regulations also contain provisions, at 40 CFR 80.72, establishing criteria and procedures for opting out of the program for those states that had previously voluntarily opted into the program (“opt-out provisions”). For example, the opt-out provisions require that a governor, or his or her authorized representative, submit an opt-out petition to the Administrator of the Agency. The opt-out petition must include certain information, including a description of how, if at all, reformulated gasoline has been relied upon

⁶ CAA section 211(k)(5) prohibits the sale of conventional gasoline (i.e., gasoline that the EPA has not certified as reformulated) in certain ozone nonattainment areas beginning January 1, 1995. CAA section 211(k)(10)(D) defines the areas initially covered by the federal RFG program as ozone nonattainment areas having a 1980 population in excess of 250,000 and having the highest ozone design values during the period 1987 through 1989. In addition, under CAA section 211(k)(10)(D), any area reclassified as a severe ozone nonattainment area under CAA section 181(b) is also included in the federal RFG program.

⁷ A copy of Kentucky’s letter is included in the docket.

as a control measure in any state or local implementation plan or in any proposed plan that is pending before EPA. This would include, for example, attainment as well as maintenance plans. The petition must also include an explanation of whether the state is intending to submit a revision to an approved or pending plan that does not use RFG as a control measure, and a description of alternative air quality measures, if any, that will replace the use of RFG; a description of the current status of any proposed revision to an approved or pending plan that uses RFG; and a projected schedule for the plan revision submission. *See* 40 CFR 80.72(b)(3) and (b)(4).

On April 18, 2017, Kentucky submitted a petition to the EPA Administrator requesting to opt-out of the federal RFG program in the Northern Kentucky Area and as stated above, this SIP revision is submitted in support of that petition (particularly the requirements of 40 CFR 80.72(b)(3) and (b)(4)).⁸ Kentucky's opt-out petition will be acted on by the Administrator in a separate action, and if approved in that separate action, will establish the effective date of the opt-out, which cannot be less than 90 days from the effective date of the approval of the SIP revision that is the subject of today's proposal. EPA will also publish a notice in the Federal Register to notify the public of the effective date of any opt-out approval.

IV. What are the Section 110(l) Requirements?

The modeling associated with KDAQ's maintenance plan for the 2008 8-hour ozone NAAQS is premised upon the future-year emissions estimates for 2017, 2020, and 2030, which are based on the RFG requirement. To support Kentucky's requested SIP revision to remove the maintenance plan's reliance on the federal RFG requirements in Boone, Campbell, and Kenton

⁸ A copy of the opt-out petition is included in the docket.

Counties, the Commonwealth must demonstrate that the requested change will satisfy section 110(l) of the CAA. Section 110(l) requires that a revision to the SIP not interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 171), or any other applicable requirement of the Act. Kentucky submitted a non-interference demonstration with this SIP revision and EPA is proposing to find that the analysis demonstrates noninterference based on an evaluation of current air quality monitoring data and the information provided in the noninterference demonstration.

EPA evaluates each section 110(l) noninterference demonstration on a case-by-case basis considering the circumstances of each SIP revision. EPA interprets section 110(l) as applying to all NAAQS that are in effect, including those that have been promulgated but for which EPA has not yet made designations. The degree of analysis focused on any particular NAAQS in a noninterference demonstration varies depending on the nature of the emissions associated with the proposed SIP revision. EPA's section 110(l) analysis of the noninterference demonstration included as part of Kentucky's September 13, 2017, SIP revision is provided below.

V. What is EPA's Analysis of Kentucky's Submittal?

a. Overall Preliminary Conclusions Regarding Kentucky's Noninterference Analyses

The RFG program is designed to reduce ozone levels and air toxics in areas that are required to or volunteered to adopt the program. RFG gasoline reduces motor vehicle emissions of the ozone precursors, NO_x and VOC (mainly VOC), through fuel reformulation. On September 13, 2017, KDAQ submitted a SIP revision along with a corresponding noninterference demonstration to support Kentucky's separate petition to opt-out of the RFG requirements for Boone, Campbell, and Kenton Counties. This noninterference demonstration

includes an evaluation of the impact that removing RFG from these counties would have on the Area's ability to attain or maintain the 2008 ozone NAAQS and any other NAAQS in the Kentucky Area.⁹ Kentucky's noninterference analysis also evaluated the impact of the removal of RFG on the Area's ability to attain or maintain the ozone, particulate matter (PM),¹⁰ nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and carbon monoxide (CO) NAAQS.

KDAQ's noninterference analysis utilized EPA's MOVES2014a emission modeling system to estimate emissions for years 2017, 2020, and 2030 for on-road and non-road mobile sources. *See* Appendix E-1 and E-2 of the September 13, 2017, submittal for detailed modeling protocol.¹¹ The NONROAD2008 model within MOVES2014a was used to model the non-road sources. These mobile source emissions are used as part of the evaluation of the potential impacts to the NAAQS that might result exclusively from removing the RFG requirements. NO_x and VOC emissions were calculated for a typical summer July day.

As summarized in Tables 1 and 2, below, the MOVES model projects small increases in on-road mobile source VOC and NO_x emissions in the Northern Kentucky portion of the Cincinnati-Hamilton OH-IN-KY 2008 8-hour Ozone Area from removing the federal RFG requirements. On-road mobile sources include vehicles used on roads for transportation of passengers or freight. Daily on-road mobile VOC emissions are projected to increase by 0.25 ton in 2017 down to 0.05 ton in 2030 during the high ozone season.¹² Daily on-road NO_x emissions are projected to increase by 0.29 ton in 2017 down to 0.06 ton in 2030. The modeling

⁹ The six NAAQS for which EPA establishes health and welfare based standards are CO, lead, NO₂, ozone, PM, and SO₂. RFG requirements do not have an impact on actual or modeled lead emissions.

¹⁰ PM is composed of PM_{2.5} and PM₁₀.

¹¹ The modeling results and original emissions inventories for the 2008 8-hr Redesignation Request and Maintenance Plan is included in the docket.

¹² High ozone season begins June 1st and ends September 15th of each year.

shows an overall downward trend in on-road emissions from removing RFG from the area.

Daily VOC emissions decrease by 64.5 percent and daily NOx emissions decrease by 74.6 percent.

**Table 1. On-road VOC Emissions RFG vs. Non-RFG
tons per summer day (TSD)**

Counties	2014	2017		2020		2025		2030	
	RFG	RFG	Non-RFG	RFG	Non-RFG	RFG	Non-RFG	RFG	Non-RFG
Boone	2.53	2.00	2.09	1.53	1.58	1.19	1.23	0.86	0.87
Campbell	1.58	1.18	1.23	0.90	0.93	0.70	0.73	0.51	0.52
Kenton	2.39	2.10	2.21	1.61	1.66	1.25	1.29	0.90	0.92
NKY	6.50	5.28	5.53	4.03	4.18	3.14	3.25	2.26	2.31
Totals¹³									
Emissions Increase		0.25		0.15		0.11		0.05	

**Table 2. On-road NOx Emissions RFG vs. Non-RFG
tons per summer day (TSD)**

Counties	2014	2017		2020		2025		2030	
	RFG	RFG	Non-RFG	RFG	Non-RFG	RFG	Non-RFG	RFG	Non-RFG
Boone	5.46	4.49	4.58	3.20	3.26	2.28	2.32	1.36	1.38

¹³ The totals in the column may differ slightly from the submittal due to how the decimal places were truncated.

Campbell	3.41	2.55	2.60	1.82	1.86	1.30	1.32	0.77	0.78
Kenton	5.17	4.54	4.69	3.24	3.30	2.30	2.35	1.37	1.40
NKY Totals	14.04	11.58	11.87	8.26	8.42	5.88	5.99	3.50	3.56
Emissions Increase		0.29		0.16		0.11		0.06	

Tables 3 and 4, below, show the total projected emissions of VOC and NO_x from all sectors in the Northern Kentucky portion of the Cincinnati-Hamilton OH-KY-IN 2008 8-hour Ozone Area. Kentucky's emissions inventory for its portion of the Area provides 2011 anthropogenic emissions data for NO_x and VOC for the following general source categories: point (Electric Generating Units and Non-Electric Generating Units and aircraft emissions),¹⁴ area, non-road mobile, and on-road mobile. All emissions information provided is based on the partial county boundaries, through the applicable census tracts, that comprise the Kentucky portion of the Area. Tables 3 and 4, below, provides a summary of the emissions inventory.

Emissions reported for 2014 assume the use of RFG for Boone, Campbell, and Kenton Counties whereas emissions from 2017 through 2030 assume no RFG.

**Table 3. Total VOC Emissions Projections All Sectors
Northern Kentucky Area (TSD)**

VOC	2014	2017	2020	2025	2030
BOONE					

¹⁴ The emissions inventories in Kentucky's submission identify aircraft emissions as a standalone category and refer to these emissions as "air emissions" for consistency with the inventories provided by Indiana and Ohio for their respective portions of the Area. Indiana Department of Environmental Management (IDEM) provided aircraft emissions data for Kentucky, and Kentucky included these emissions in Boone County where the Cincinnati/Northern Kentucky International Airport is located. EPA has included these emissions within the point source category per the AERR.

EGU	0.16	0.16	0.16	0.16	0.16
Non-EGU	1.57	1.57	1.57	1.57	1.57
Air	0.42	0.44	0.45	0.26	0.06
Non-road	1.30*	2.25**	2.06**	2.04**	2.01**
Area	2.56	2.46	2.41	2.38	2.36
On-road	2.53*	2.09**	1.58**	1.23**	0.87**
Total	8.54	8.97	8.23	7.63	7.03
CAMPBELL					
EGU	0.00	0.00	0.00	0.00	0.00
Non-EGU	0.22`	0.22	0.22	0.22	0.21
Air	0.00	0.00	0.00	0.00	0.00
Non-road	0.34*	0.55**	0.50**	0.49**	0.48**
Area	1.26	1.23	1.22	1.21	1.19
On-road	1.58*	1.23**	.93**	0.73**	0.52**
Total	3.4	3.23	2.87	2.65	2.40
KENTON					
EGU	0.00	0.00	0.00	0.00	0.00
Non-EGU	0.51	0.50	0.49	0.48	0.47
Air	0.00	0.00	0.00	0.00	0.00
Non-road	0.55*	1.01**	1.00**	1.05**	1.09**
Area	2.43	2.35	2.31	2.28	2.25
On-road	2.39*	2.21**	1.66**	1.29**	0.92**
Total	5.88	6.07	5.46	5.10	4.73
NKY TOTAL	17.82	18.27	16.56	15.38	14.16
*With RFG **Without RFG					

**Table 4. Total NOx Emissions Projections All Sectors
Northern Kentucky Area (TSD)**

NOx	2014	2017	2020	2025	2030
BOONE					
EGU	7.23	7.46	7.71	7.96	8.33
Non-EGU	0.14	0.15	0.15	0.18	0.18
Air	2.07	2.18	2.29	1.29	0.29
Non-road	0.88*	1.60**	1.33**	1.17**	1.00**
Area	0.43	0.43	0.43	0.44	0.44

On-road	5.46*	4.58**	3.26**	2.32**	1.38**
Total	16.21	16.40	15.17	13.35	11.62
CAMPBELL					
EGU	0.00	0.00	0.00	0.00	0.00
Non-EGU	0.17	0.17	0.17	0.17	0.17
Air	0.00	0.00	0.00	0.00	0.00
Non-road	0.32*	0.53**	0.45**	0.40**	0.35**
Area	0.49	0.49	0.49	0.49	0.49
On-road	3.41*	2.60**	1.86**	1.32**	0.78**
Total	4.39	3.79	2.97	2.38	1.79
KENTON					
EGU	0.00	0.00	0.00	0.00	0.00
Non-EGU	0.01	0.01	0.01	0.01	0.01
Air	0.00	0.00	0.00	0.00	0.00
Non-road	0.64*	1.12**	0.93**	0.83**	0.73**
Area	1.02	1.02	1.02	1.02	1.02
On-road	5.17*	4.69**	3.30**	2.35**	1.40**
Total	6.84	6.84	5.26	4.20	3.15
NKY TOTAL	27.44	27.03	23.40	19.93	16.56
*With RFG					
**Without RFG					

There were little to no changes in NO_x and VOC emissions from the point source categories that would impact the RFG removal in the Northern Kentucky Area. The original point source categories inventory contains actual point source emissions data for facilities located within the nonattainment boundary for the Kentucky portion of the Area based on the Kentucky Emissions Inventory database.¹⁵

Area sources are small emission stationary sources which, due to their large number, collectively have significant emissions (e.g., dry cleaners, service stations). The modeling

¹⁵ As discussed above, EPA has included aircraft emissions within the point source category per the AERR.

results show a reduction in VOC emissions and little to no change in NOx emissions by removing RFG from these sources

Non-road mobile sources include vehicles, engines, and equipment used for construction, agriculture, recreation, and other purposes that do not use roadways (e.g., lawn mowers, construction equipment, and railroad locomotives). Modeling results indicate there are slight VOC emissions increases from removing RFG. From 2017 to 2030, the VOC emissions increases fall within a range of 0.22 tsd to 0.24 tsd in the Northern Kentucky Area. The NOx emissions remain the same from 2017 to 2030 when RFG is removed. *See Appendix E-2 of the submittal.*¹⁶

Overall, the modeling shows VOC emissions decrease from the 2014 attainment year to the 2030 “out year” by 3.66 tsd which is a 20.5 percent reduction. NOx emissions also decrease from the 2014 attainment year to the 2030 “out year” by 10.88 tsd which is a 39.7 percent NOx reduction without RFG in the Northern Kentucky portion of the Cincinnati-Hamilton OH-KY-IN Area 2008 8-hour Ozone Area.

b. Noninterference Analysis for the Ozone NAAQS

As a previous 1-hour ozone nonattainment area, Kentucky opted Boone, Campbell, and Kenton Counties into the federal RFG requirements for high ozone season gasoline to help bring the area into attainment for the 1-hour ozone NAAQS. This control measure continues to apply in the Northern Kentucky Area because the Commonwealth did not, until now, petition for the removal of the federal RFG requirements. The RFG program has contributed toward lowering VOC and NOx emissions in the Northern Kentucky Area. Implementation of federal control

¹⁶ Appendix E-2 of the September 13, 2017 submittal details the increases in non-road emissions with and without RFG.

measures such as Tier 3 Motor Vehicle Emissions and Fuel Standards,¹⁷ Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements,¹⁸ Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles-Phase 2,¹⁹ and Model Year 2017 and Later Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards,²⁰ along with fleet turnover, further reduced NOx and VOC emissions in the area. As a result, the Northern Kentucky Area was redesignated to attainment for the 1-hour ozone NAAQS, the 1997 8-hour ozone NAAQS, and the 2008 8-hour ozone NAAQS. The Northern Kentucky Area is continuing to meet the 1-hour ozone NAAQS and the 1997 8-hour ozone NAAQS, even though these NAAQS have been revoked,²¹ as well as the 2008 8-hour ozone NAAQS, based on recent air quality monitoring data.²² The 2008 ozone NAAQS is met when the annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years is 0.075 ppm or less. The 2015 ozone NAAQS, as published in a final rule on October 26, 2015 (80 FR 65292), is met when the annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years is 0.070 ppm or less. The trend in monitoring levels for ozone for the Northern Kentucky portion of the Cincinnati-Hamilton OH-KY-IN Area is shown in Table 5, with the current monitoring levels for the Boone and Kenton County monitors for the period of 2014-2016 being 0.062 ppm and 0.070 ppm, respectively.

Table 5. Monitoring Level Concentrations for the Northern Kentucky Area (ppm)

¹⁷ 79 FR 23414

¹⁸ 66 FR 5002

¹⁹ 81 FR 73478

²⁰ 77 FR 62624

²¹ 70 FR 44470 and 80 FR 12264, respectively

²² On May 4, 2016 (81 FR 26697), EPA determined the Cincinnati-Hamilton, OH-KY-IN Area attained the 2008 8-hr ozone NAAQS by the attainment date.

Location	Site ID	4th Highest 8-hour Ozone Value (ppm)				3-Year Design Values (ppm)	3-Year Design Values (ppm)
		2013	2014	2015	2016	2013-2015	2014-2016
Boone, KY	21-015-0003	0.059	0.062	0.063	0.061	0.061	0.062
Campbell, KY	21-037-3002	0.072	0.071	0.071	0.068	0.071	0.070

EPA also evaluated the potential increase in the VOC and NO_x precursor emissions and whether it is reasonable to conclude that the requested removal of the RFG requirements in Northern Kentucky during the high ozone season would cause the Area to violate any ozone NAAQS. Table 5 shows that there is an overall downward trend in ozone concentrations in the Northern Kentucky Area. This decline can be attributed to federal and state programs in addition to those mentioned above that have led to significant emissions reductions in ozone precursors, such as the federal interstate transport rule known as the Cross State Air Pollution Rule (CSAPR), federal standards in on-road and non-road mobile source sectors such as the Corporate Average Fuel Economy (CAFE) standards (*See* 75 FR 25324), and Tier Motor Vehicle Emissions and Fuel Standards (79 FR 23414). Given the results of Kentucky's emissions analysis, the downward trend in precursor emissions, and the current ozone concentrations in the Northern Kentucky Area, EPA is proposing to find that removing reliance on RFG requirements in Boone, Campbell, and Kenton Counties will not interfere with Kentucky's ability to maintain the 2008 8-hour ozone NAAQS.

c. Noninterference Analysis for the Carbon Monoxide NAAQS

EPA initially established NAAQS for CO on April 30, 1971 (36 FR 8186). The standards were set at 9 ppm as an 8-hour average and 35 ppm as a 1-hour average, neither to be

exceeded more than once per year. On November 6, 1971 (56 FR 56694), EPA designated areas for the 8-hour CO NAAQS. The Northern Kentucky counties of Boone, Campbell, and Kenton have never been designated nonattainment for any CO NAAQS. EPA retained the 1-hour and 8-hour CO NAAQS on August 31, 2011, and Kentucky has continued to maintain compliance with the NAAQS due to non-RFG federal control measures put in place. RFG requirements will have little to no impacts on CO emissions because, as mentioned earlier, the RFG program was developed to address emissions of the ozone precursors, NO_x and VOC. As a result, EPA is proposing to find that removing reliance on RFG requirements in Boone, Campbell, and Kenton Counties will not interfere with Kentucky's ability to continue attaining the CO NAAQS.

d. Noninterference Analysis for the Particulate Matter NAAQS

The main precursor pollutants for PM_{2.5} are NO_x, SO₂, VOC, and ammonia. As mentioned above, the federal RFG requirements result in emissions benefits for VOC, NO_x and air toxics. Over the course of several years, EPA has reviewed and revised the PM_{2.5} NAAQS a number of times. On July 16, 1997, EPA established an annual PM_{2.5} NAAQS of 15.0 micrograms per cubic meter (µg/m³), based on a 3-year average of annual mean PM_{2.5} concentrations, and a 24-hour PM_{2.5} NAAQS of 65 µg/m³, based on a 3-year average of the 98th percentile of 24-hour concentrations. *See* 62 FR 36852 (July 18, 1997). On September 21, 2006, EPA retained the 1997 Annual PM_{2.5} NAAQS of 15.0 µg/m³ but revised the 24-hour PM_{2.5} NAAQS to 35 µg/m³, based again on a 3-year average of the 98th percentile of 24-hour concentrations. *See* 71 FR 61144 (October 17, 2006). The 1997 Annual PM_{2.5} NAAQS has been revoked for all purposes effective October 24, 2016 (81 FR 58010). On December 14, 2012, EPA retained the 2006 24-hour PM_{2.5} NAAQS of 35 µg/m³ but revised the annual primary PM_{2.5}

NAAQS to $12.0 \mu\text{g}/\text{m}^3$, based again on a 3-year average of annual mean $\text{PM}_{2.5}$ concentrations. See 78 FR 3086 (January 15, 2013). The Northern Kentucky area was designated as unclassifiable/attainment on April 15, 2015 (80 FR 18535).

$\text{PM}_{2.5}$ levels across Kentucky declined from 1999 to 2016. In 2016, there were 19 $\text{PM}_{2.5}$ monitors in Kentucky including one in Campbell County. The Campbell County $\text{PM}_{2.5}$ monitor calculated a 3-weighted average design value of $8.9 \mu\text{g}/\text{m}^3$. The largest sources of $\text{PM}_{2.5}$ in Kentucky are from fires, agriculture, dust, fuel combustion, and industrial processes.²³ Moreover, there have been a number of studies which have indicated that SO_2 is the primary driver of $\text{PM}_{2.5}$ formation in the Southeast.²⁴ Opting out of the RFG requirements in the Area will have little to no impact on the precursor emissions as indicated by the decline in VOC and NO_x emissions in Tables 3 and 4 above.

Based on this information and the current attainment status of the Cincinnati-Hamilton OH-KY-IN 2012 $\text{PM}_{2.5}$ Area, EPA is proposing to find that removing reliance on RFG requirements in Boone, Campbell, and Kenton Counties will not interfere with Northern Kentucky's ability to maintain the 2012 $\text{PM}_{2.5}$ NAAQS.

e. Noninterference Analysis for the 2010 NO_2 NAAQS

On February 9, 2010 (75 FR 6474), EPA strengthen the NO_2 standards. All of the counties in Kentucky were designated unclassifiable/attainment for the 2010 NO_2 NAAQS on

²³ <https://www.epa.gov/air-emissions-inventories/air-emissions-sources>

²⁴ See, e.g., *Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States*, Journal of Environmental Engineering (June 24, 2009), available at: <http://www.sciencedirect.com/science/article/pii/S0301479709001893?via%3Dihub>

February 17, 2012 (77 FR 9532). There are both primary and secondary standards for NO₂. The primary NAAQS is an annual arithmetic mean that must not exceed 53 parts per billion (ppb). A 3-year average of the 98th percentile of daily maximum 1-hr averages must not exceed 100 ppb. The secondary standard is an annual arithmetic mean that must not exceed 53 ppb. In 2016, Kentucky operated seven NO₂ monitors, including one in Campbell County. The 2014-2016 1-hr average design value for the Campbell County NO₂ monitor is 30 ppb, with an annual mean of 2.31 ppb. Both of these values are significantly below the respective standards of 100 ppb and 53 ppb. Based on the technical analysis in Kentucky's September 13, 2017, noninterference demonstration, as shown in Table 4, there is a reduction in NO_x emissions from the 2014 attainment year to the 2030 "out year" from 27.44 tsd to 16.56 tsd which is a 39.7 percent reduction overall.

Based on the amount of NO_x reductions, the use of pollution control devices on power plants, industrial boilers, fleet turnover, and other federal control measures for motor vehicles, EPA is proposing to find that removing reliance on RFG requirements in Boone, Campbell and Kenton Counties will not interfere with Kentucky's ability to continue attaining the 2010 NO₂ NAAQS in the Northern Kentucky Area.

f. Noninterference Analysis for the SO₂ NAAQS

On June 22, 2010 (75 FR 35520), EPA revised the SO₂ standard. There are both primary and secondary standards for SO₂. The primary SO₂ NAAQS is a 3-year average of the 99th percentile of the daily maximum 1-hour concentration not to exceed 75 ppb. The secondary standard is a 3-hour concentration not to exceed 0.5 ppm more than once per year. In 2016, Kentucky operated 12 SO₂ monitors, including one in Campbell County. The Campbell County

SO₂ monitor has a 2014-2016 design value of 30 ppb for the 1-hour SO₂ NAAQS.

Based on the monitoring/modeling data, EPA is proposing to find that removing reliance on RFG requirements in Boone, Campbell, and Kenton Counties will not interfere with Kentucky's ability to maintain the SO₂ NAAQS.

VI. Proposed Action

EPA is proposing to approve Kentucky's revision to its maintenance plan and corresponding noninterference demonstration, submitted on September 13, 2017, in support of Kentucky's separate petition to opt-out of the federal RFG requirements for Boone, Campbell, and Kenton Counties. Specifically, EPA is proposing to find that this change in removing reliance on the federal RFG requirements for Boone, Campbell, and Kenton Counties will not interfere with attainment or maintenance of the NAAQS or with any other applicable requirement of the CAA. Kentucky's September 13, 2017, SIP revision updates its maintenance plan and the associated MVEBs related to Kentucky's redesignation request for the Kentucky portion of the 2008 Cincinnati-Hamilton OH-IN-KY 8-hour Ozone Area to reflect emissions changes for opting out of federal the RFG requirements. EPA is proposing to approve the changes to update the 2008 maintenance plan and associated 2020 and 2030 MVEBs. The same criteria used to develop the MVEBs in the original SIP are used for this SIP revision. *See* Table 6 below.

Table 6. Updated MVEBs for the Kentucky Portion of Cincinnati-Hamilton, OH-KY-IN Area (TSD)

	2020		2030	
	NO _x	VOC	NO _x	VOC

On-Road Emissions	8.42	4.17	3.56	2.31
Safety Margin	.61	.19	1.63	.55
MVEBs with Safety Margin	9.03	4.36	5.19	2.86

EPA has preliminarily determined that Kentucky's September 13, 2017, SIP revision is consistent with the applicable provisions of the CAA, including section 110(l). In this action, EPA is not proposing to act on the Commonwealth's opt-out petition to the EPA Administrator to remove the federal RFG requirement for Boone, Campbell, and Kenton Counties. Any decision by the Administrator on the opt-out petition would occur in a separate action.

VII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. This action merely proposes to approve changes to the Commonwealth's maintenance plan emissions inventory and associated MVEBs to remove reliance on emissions reductions from the federal RFG program requirements. For that reason, this proposed action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);

- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866.
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA

or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rulemaking does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: February 6, 2018.

Onis “Trey” Glenn, III,

Regional Administrator,

Region 4.

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